

## WHAT IS CLAIMED IS:

1. A telephone power source circuit for an internet protocol (IP) telephone connected to a network, in which a direct current with a signal is received via the network for charging an input capacitor to thereby obtain operation voltage of each constituent components of the  
5 IP telephone, comprising:

a direct-current to direct-current (DC/DC) converter for obtaining a voltage to charge the input capacitor, and

an input current limiting register connected to an input terminal of said DC/DC converter for limiting the direct current  
10 inputted from the network.

2. A telephone power source circuit in accordance with claim 1, further comprising an input voltage sensor circuit for monitoring an input voltage to said DC/DC converter, an output from said DC/DC converter being delayed according to a result of the monitoring by said  
5 input voltage sensor circuit.

3. A telephone power source circuit in accordance with claim 1, wherein said input capacitor has a capacity of about 100  $\mu$ F.

4. A telephone power source circuit in accordance with claim 2, wherein said input capacitor has a capacity of about 100  $\mu$ F.

5. A telephone power source circuit in accordance with claim 1 further comprising limit removing means for removing the limitation imposed by said input current limiting resistor.

6. A telephone power source circuit in accordance with claim 2 further comprising limit removing means for removing the limitation

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imposed by said input current limiting resistor.

7. A telephone power source circuit in accordance with claim 3 further comprising limit removing means for removing the limitation imposed by said input current limiting resistor.

8. A telephone power source circuit in accordance with claim 4 further comprising limit removing means for removing the limitation imposed by said input current limiting resistor.

9. A telephone power source circuit in accordance with claim 5, wherein said limit removing means is a switching transistor connected in parallel with said input current limiting resistor.

10. A telephone power source circuit in accordance with claim 6, wherein said limit removing means is a switching transistor connected in parallel with said input current limiting resistor.

11. A telephone power source circuit in accordance with claim 7, wherein said limit removing means is a switching transistor connected in parallel with said input current limiting resistor.

12. A telephone power source circuit in accordance with claim 8, wherein said limit removing means is a switching transistor connected in parallel with said input current limiting resistor.

13. A telephone power source circuit in accordance with claim 9, wherein said switching transistor is driven by a driving transistor, said driving transistor operating according to a voltage received via a delay circuit from said DC/DC converter.

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14. A telephone power source circuit in accordance with claim 10, wherein said switching transistor is driven by a driving transistor, said driving transistor operating according to a voltage received via a delay circuit from said DC/DC converter.

15. A telephone power source circuit in accordance with claim 11, wherein said switching transistor is driven by a driving transistor, said driving transistor operating according to a voltage received via a delay circuit from said DC/DC converter.

16. A telephone power source circuit in accordance with claim 12, wherein said switching transistor is driven by a driving transistor, said driving transistor operating according to a voltage received via a delay circuit from said DC/DC converter.

17. A telephone power source circuit in accordance with claim 9, wherein said telephone includes a central processing unit (CPU), said CPU determining control timing for turning said switching transistor on or off.

18. A telephone power source circuit in accordance with claim 10, wherein said telephone includes a central processing unit (CPU), said CPU determining control timing for turning said switching transistor on or off.

19. A telephone power source circuit in accordance with claim 11, wherein said telephone includes a central processing unit (CPU), said CPU determining control timing for turning said switching transistor on or off.

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20. A telephone power source circuit in accordance with claim 12, wherein said telephone includes a central processing unit (CPU), said CPU determining control timing for turning said switching transistor on or off.

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